



Concrete Tea Light Holder

Written By: Ray Alderman



TOOLS:

- [Drill, or drill press, and 1/8" drill bit \(1\)](#)
- [Metal ruler \(1\)](#)
- [Popsicle sticks \(1\)](#)
- [Utility knife \(1\)](#)
- [flat toothpicks \(1\)](#)
- [measuring cups and spoons \(1\)](#)
- [scrap 2x2 and plywood \(1\)](#)
- [small pliers \(1\)](#)



PARTS:

- [modeling clay or plumber's putty \(1\)](#)
- [anchoring cement \(1\)](#)
- [empty 2-liter bottle \(1\)](#)
- [Freezer paper \(1\)](#)
- [metal cookie cutter \(1\)](#)
- [Scotch tape \(1\)](#)

SUMMARY

I've been wanting to try out some new ideas for simpler projects that can be done over a weekend, kind of a rainy-day thing for parents with kids or just some friends hanging out together. This is my first attempt at it.

I've been playing around with concrete candle holders for a bit now but found myself limited to easy-to-make outline shapes. Then I remembered all the crazy different cookie cutters my housemate has in her baking closet. I found that some of them have very interesting shapes indeed and went out and got a few on my own on Amazon and eBay and the local gourmet cooking store. They work surprisingly well for concrete work and here's a simple way to use

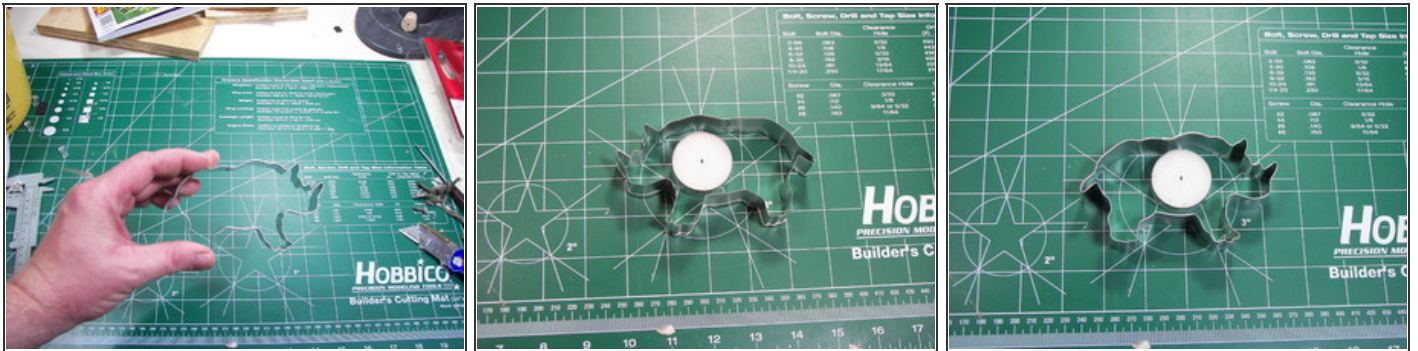
them at home.

This project uses anchoring cement as the concrete element. This cement is great for smaller projects like this, as it cures quickly (overnight to be safe) and can be mixed with water to the point where it is pourable.

For most small-scale concrete work the water to dry-mix ratio is extremely important and having too much or too little can mess up everything. For my [concrete lightbulbs](#) I measure it out to the gram and even then there are variations per batch. Anchoring cement is far more forgiving and allows you to use kitchen measuring cups and spoons and semi-close is good enough. Having pourable cement means that it will fill your mold completely.

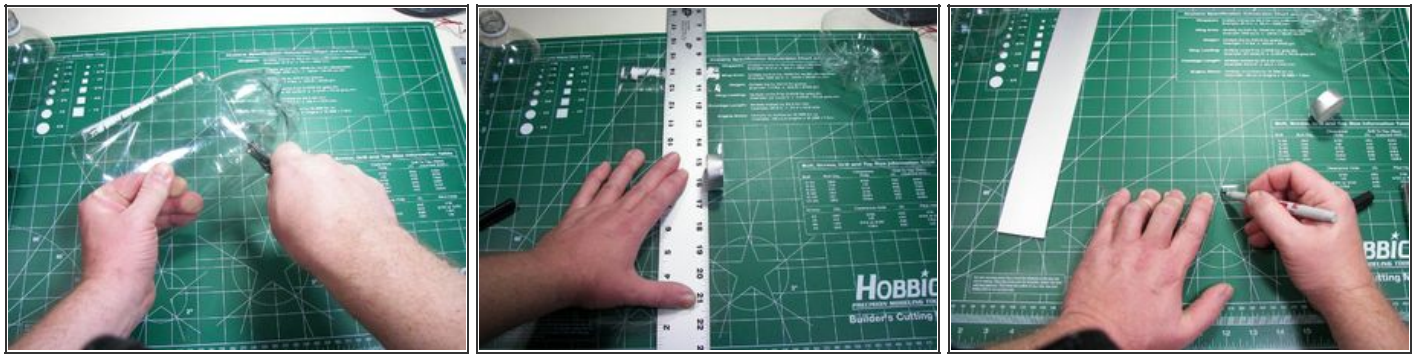
For more of my concrete and other crafty work, check out my stuff [here](#).

Step 1 — Find a big enough cookie cutter you like



- The trick is finding a cookie cutter you like that also has a big enough area inside it to hold a tea light candle.
- For this project I went with a rhino cookie cutter. I've also done polar bears, triceratops and hippos.
- The original cookie cutter doesn't have to be perfect to start. You can bend the metal around and make the object "fatter" to fit the tea light - we do that in step 4 with the rhino.

Step 2 — Cut plastic strip from a 2-liter bottle



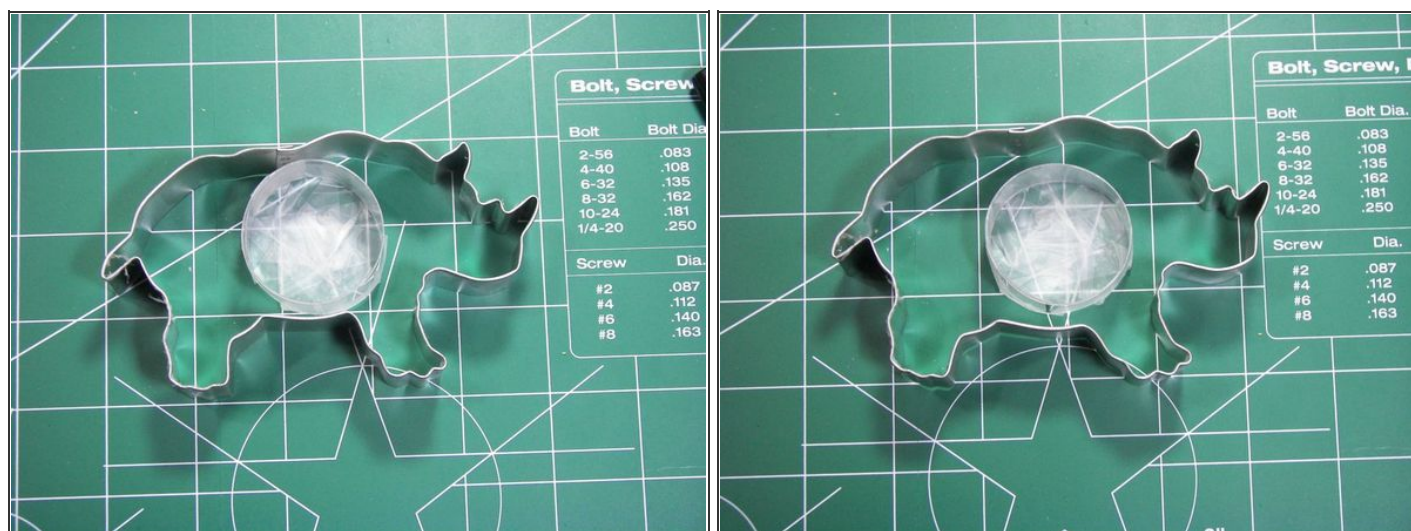
- We want a strip of plastic that is 6 inches long and a hair wider than a tea light candle is tall. First thing, butcher the 2-liter bottle.
- Take a standard 2-liter bottle and cut off the label and wash it out.
- Cut open the top and bottom as evenly as you can - don't worry if it's a bit jagged. If you are at full efficiency, you can get around a dozen strips out of a single 2-liter bottle. So if you have some jagged lines and only get the one or two we need, it's fine.
- Once you have the flat middle part of the bottle cut out, lay it flat and with your ruler and utility knife cut a flat, straight edge. It doesn't have to be square the the rest of it; you just need a good edge to base everything else off of.
- Once you have a straight edge, take a tea light candle on edge and put it on the plastic. Move it so it's a hair off the edge you just cut. This will give the mold a bit more room than the tea light needs.
- Cut the tea light width strip out. Now take that and cut it to 6 inches long.
- Finally, lay it out and mark a line at the one-inch point from right. Now you have a line that is 1 inch from one end and 5 inches from the other.

Step 3 — Turn plastic strip into a mold



- Let the strip curl up and line the edge up with the mark you made, so the circumference is 5 inches.
- Using a piece of Scotch tape, tape over one end so the plastic strip stays in its 5-inch circumference circle.
- This make a circle with an outside diameter a bit more than your typical tea light candle - what you want for a one-time mold.
- Using strips of Scotch tape, close off one end of the plastic circle. Use the tape to make the plastic more round and less of an oval, and make sure the end is fully sealed off. The tea light should fit inside this with a little room to move around.

Step 4 — Bend Cookie Cutter to Fit



- Take your tea light mold and place it inside the cookie cutter. Is there some room between it and the walls of the cutter? You want about a quarter-inch or more so the walls are not too thin and won't break easily.
- If there isn't enough room on the sides of the tea light mold, carefully bend the cookie cutter to fit. As you can see in the pictures, I made the rhino "fatter" so the mold now has plenty of room around it.

Step 5 — Drill out Cookie Cutter spot welds



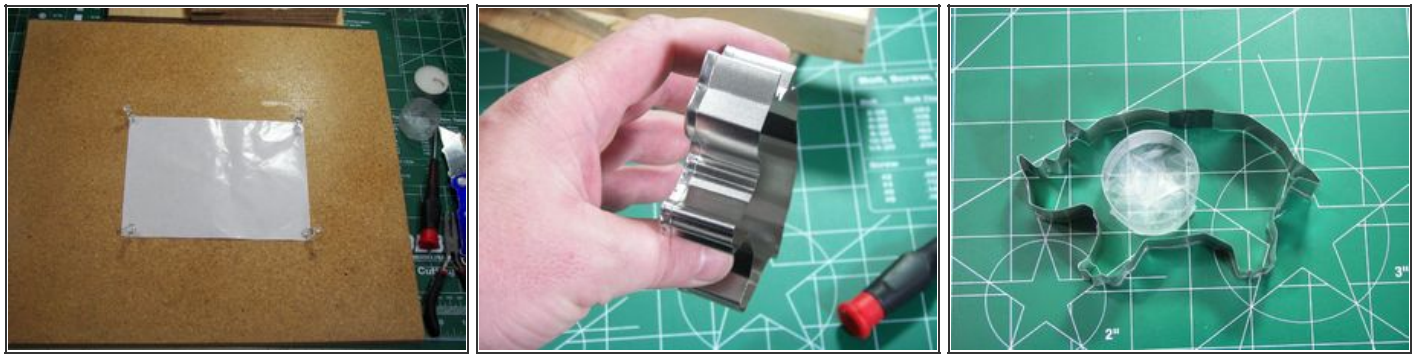
- Now that the cookie cutter is shaped correctly, it's time to take out the spot welds holding it together. On the basic metal ones like our friend Rhino here, there are usually three spot welds holding the edges together.
- Using some scrap wood to support the cookie cutter, drill out the spot welds with a 1/8" drill bit.
- After drilling out all the welds, use a flat screwdriver to pry up the edges. There might be some tiny bits of weld still holding, like there were on the rhino. I just pulled them apart slowly till it finally gave way.

Step 6 — Clean up and Prepare the Cookie Cutter



- The ends of the cookie cutter you just pulled apart might be a bit of a mess. I used a pair of flat pliers to get rid of the ridges and high points and clean up the ends.
- Once you have cleaned it up a bit, we need to put the ends back where they belong and tape them in place.
- Put the ends of the cookie cutter back where they were before you drilled out the spot welds. Take a piece of electrical tape and apply it to the inside as smoothly as possible - this will be touching the concrete and leaving mold lines.
- Fold the ends of the electrical tape over the outside of the cookie cutter and now it's back to the shape it was before you drilled out the spot welds, but you can now pry up the ends by removing the electrical tape.

Step 7 — Prepare the mold surface



- We are using freezer paper for one side of the mold. Using some scrap wood I pinned down a small square of the paper (shiny side up) so the edges wouldn't curl up and make life more difficult.
- Check one more time to see if the tea light mold fits into the Rhino. All that drilling and bending might have tweaked the cookie cutter too far out of whack. We need to be within whack.
- We are going to place the molding clay dam on the side of the Rhino with the double thickness of metal, so for the mold the horn will be to the left and the tail to the right.

Step 8 — Dam up the Rhino



- Because concrete when it is mixed up is a liquid with water, you have to make a dam around the mold so it doesn't leak out everywhere, for certain values of leak. Some leaking is OK, gushing out is not.
- Take your molding clay between your hands and roll out a thin snake, about the thickness of a drinking straw. Do as much as you feel comfortable rolling out.
- Take the clay roll and place it around the edge of the cookie cutter, on the side that has the doubled-over edge.
- Make sure you cover all of the edge well - more than you really need is just fine at this stage. Overlapping and doubling back is OK.



Step 9 — Mount the Cookie Cutter on the Paper



- With the modeling clay side down, push the cookie cutter into the freezer paper.
- To save your hands from the sharp edge, I use a scrap piece of wood to get a nice even push down into the paper.
- You are trying to cut the modeling clay into an "inside" and "outside" piece. Once you have pressed down hard, take a toothpick and pull up all the clay on the inside. It will often come up in clumps.
- Using the tip of a toothpick, clean up the the cookie cutter to make sure there is no clay on the inside.
- Once the inside is cleaned up, use one hand to hold the cookie cutter down and the other to smooth down the outside clay. You want to make it difficult for the wet concrete to leak out under the edge of the cookie cutter. Some will, but it should have to work at it. This will also "lock" the cookie cutter in place; it shouldn't move around the paper with a nudge after you have done this

Step 10 — Add the tea light mold



- Take some of the clay strips you pulled from the inside edge and use them to go around the edge of the tea light mold.
- Put the tea light mold where you want it and press down.
- Clean up the outside clay of the tea light mold.
- Take one last look around the inside of the cookie cutter - is every piece of clay removed in all the little nooks and crevices? Using the tip of a toothpick, make it pretty.
- Congrats - you have built a mold ready for wet concrete!

Step 11 — Mix up the Concrete



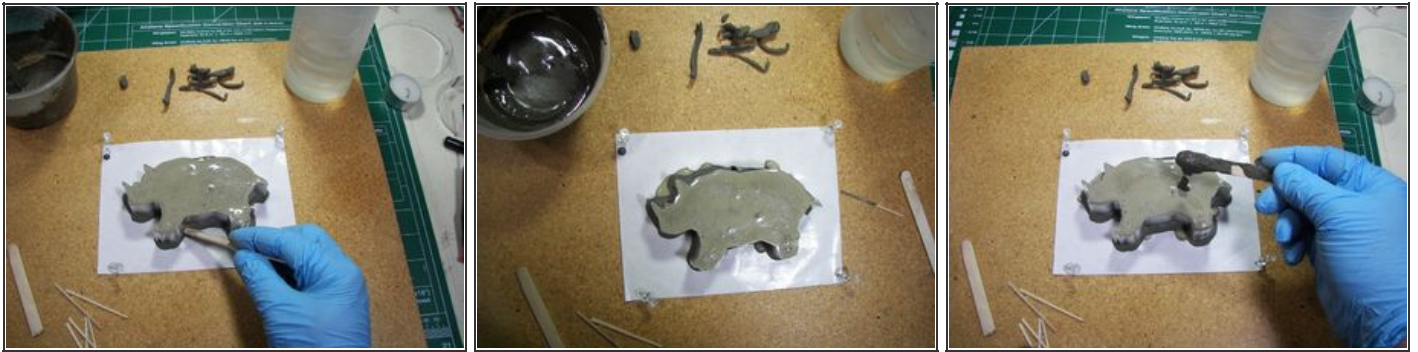
- I'm using Quikrete Anchoring Cement and eyeballed the amount I would need. For the rhino, it was 3/4 of a cup. Your cookie cutter might be more or less but that's usually a good place to start. Measure out that amount and put it in a small plastic cup you don't mind ruining.
- Add 5 tablespoons of water - this makes the mix pourable and will fill all the crevices in your mold. It will take longer to cure, overnight instead of in hours, but it's worth the extra time to make sure you have a smooth and easy pour.
- I forgot to take a photo of stirring up the concrete with a popsicle stick. Just make sure the entire mix is wet and flowing before you pour it in the mold.

Step 12 — Pour the Concrete in the Mold



- Now it's time to make all that work you have put into this pay off.
- After thoroughly mixing up the concrete, slowly pour it into the mold to where the bottom is covered to a depth of around 1/4 inch.
- Take a toothpick and poke around the cracks and crevices of your cookie cutter, making sure the wet concrete goes everywhere.
- This is the point where you want to make sure there are no voids in your pour, so check the mold from different angles to see if the concrete has gotten everywhere.
- Once you are happy with the coverage, slowly pour the rest of the concrete into the mold. This covers the tea light mold and more.
- I normally pour in the concrete so it's above the edge of the mold and it's only surface tension holding it in. Between curing and leaks, you want the pour as high as you can get it.
- After pouring, shake the table a bit and tap the side of the mold to vibrate the concrete and have air bubbles come to the surface. The anchoring cement cures so quickly that you can vibrate the air bubbles for only a few minutes after pouring.

Step 13 — Deal With Leaks



- Once you have poured the concrete, you can see the leaks around the molding clay.
- Don't worry about it too much unless there is a gusher. Where there is a leak, take a popsicle stick and press down on the clay over it. This should slow it down a bit.
- If the leaks are so bad that the level of concrete in the mold is dropping down quickly, you will have to add more molding clay to dam it up. Otherwise, let it happen.
- After about 5 minutes see if you can add a bit more concrete to the mold - I scraped some out of the plastic tub with a popsicle stick and dripped it into the mold to fill it up again, about a teaspoon or so.
- The anchoring cement cures quickly. You will notice that the leaks don't continue after a few minutes and after a half hour they are beginning to film over.

Step 14 — Let it Cure Overnight



- The pictures in order - a half-hour after pour, an hour after pour and the next day.

Step 15 — Take it off the paper




- Once it has cured overnight, pick the mold up and start to peel the freezer paper off. It comes off easily but leaves behind some of the white waxy substance, which is what gives the interesting color patterns.
- Once you have removed the paper, go around and carefully remove the modeling clay on the outside of the cookie cutter. Break off any thin bits of concrete that formed via leaks. You want to get back to the original edge of the cookie cutter with no overhangs.
- Do the same on the inside of the tea light mold, so it's back to the original plastic edge.
- In the last picture you can see the darker spots and darker gray color - this is because the concrete is still damp and this was the part at the very bottom of the mold. Now that it has been exposed to the air, it will dry quickly and all those spots and darker patches will go away in a matter of hours.



Step 16 — Remove the Concrete from the Mold



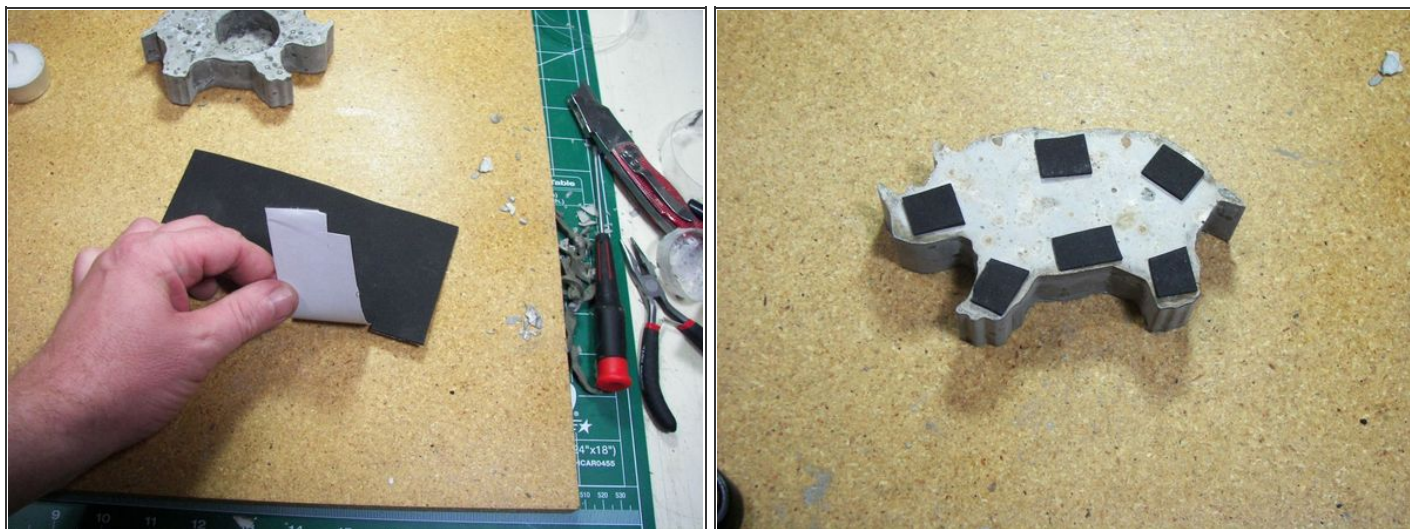
- Undo the tape holding the loose ends of the mold and gently start to pry up the exposed end with a flat screwdriver.
- The mold should come off the concrete without sticking. Be very careful around pieces that stick out and could break off easily. On the rhino this is the tail, the horn, and the ear. 
- Gently pry up the mold around these delicate bits - you don't want to break it now after all that work.
- After you have removed the concrete from the mold, check the edges to see if there are any overhanging pieces that stick out too much. You can use a utility knife to carefully scrape those down if you want to.

Step 17 — OPTIONAL - remove the plastic tea light mold



- You can leave the plastic strip tea light mold in place if you wish, but I think it looks better out of the concrete and also gives an extra bit for wider tea lights.
- With your utility knife, pry up the edge of the plastic strip. This will give you something to grip with the needle-nose pliers.
- Take your pliers and gently pull out the entire tea light mold from the concrete - if it doesn't come cleanly just pull up what pieces you can. Removing the plastic strip is the important part; if there is some tape on the bottom that will be covered by the tea light candle itself.

Step 18 — Add some Foam Feet



- Now you have a concrete tea light holder - congratulations! One final step: we need to add some padding on the bottom so this doesn't scrape up whatever surface it's placed on.
- I keep in my shop a sheet of 2mm foam with adhesive on one side for this purpose. I cut out a few squares and put them on the corners of the rhino.
- It doesn't have to be fancy, just enough to make sure the rhino doesn't rock and that if I put it on a nice hardwood table it doesn't leave scratches.

Step 19



- Admire your new Concrete Tea Light Holder
- As I mentioned, it comes out of the mold darker and with spots that will dry out in a few hours once it has been exposed to air.
- You can see this in the difference in the pictures - The one with darker concrete and all the spots is just after being pulled from the mold, and the one with the more uniform gray and white highlights (from the freezer paper) is the day after that.
- Take a look and see how the freezer paper added some coloration to the top and how you can see where the ends of the mold where taped together on the side.
- Finally, add a tea light candle and light that sucker up. You now have a unique candle holder that is different from what is available commercially. Enjoy!

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